

REMARKS

Summary of the Office Action:

In the present application, claims 1-25 are pending. Claims 1-18 and 20-25 are rejected. Claim 19 is objected to. Claims 1, 20 and 23 have been amended to particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

Claim rejections under 35 U.S.C. §103(a) and response:

Hirschtick in view of Tong

Claims 1, 3, 6, 9, 10, 13-15, 17, 18, and 20-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hirschtick et al., U.S. Patent No. 5,815,154 ("*Hirschtick*") in view of Tong et al., "Artificial Intelligence in Engineering Design" ("*Tong*").

Claims 1, 20 and 23, as amended, recite, in part:

identifying a failure within a first failed feature in a computer aided design (CAD) assembly; and
automatically providing a first set of treatments for the failure within the first failed feature from which to select, said first set of treatments based at least in part on the failure within the first failed feature, said failure resulting from modifications of one or more features of the CAD assembly.

Thus the claimed subject matter includes automatically providing a first set of treatments for a failure within a first *failed feature* in a **CAD assembly** where the first set of treatments are based, at least in part, on the failure within the first **failed feature** and the *failure results from modifications of one or more features of the CAD assembly*.

In the rejection of claim 1, the Examiner cited Figure 14-11 of *Tong* and the accompanying caption related to a computer implemented design assistant in support of the Examiner's position.

As previously stated, *Tong* discloses a software implemented system for critiquing the aesthetic elements of a graphic design with the goal of beautifying drawings. This system assists artists in making their drawings more visually pleasing by applying well-known aesthetic design principles to the user's pattern. The user is able to obtain feedback regarding whether the design violates certain design principles (*Tong* at Page 453, Paragraph 2). Once a drawing has been critiqued, the *Tong* system assists users in modifying designs to overcome the criticisms (*Tong* at Page 453, Paragraph 4).

In response, the Examiner asserts that none of the limitations cited in the claims prohibit the feature failures of claim 1 from being aesthetic in nature. As claimed, however, the feature failures are not aesthetic in nature. As described in the background of the present application, a CAD design is often an *assembly* of features. An assembly starts out with one feature, like a block of clay, and additional features are added, removed, resized reshaped, etc. See page 1, lines 8-10. As stated in claim 1, the failure in the CAD assembly results from **a modification of one or more features** of the CAD assembly. Thus, to generate a CAD assembly, features are applied. A failure in one of the features in the CAD assembly results in an inability to create a CAD assembly that includes the failed feature, for example, the feature is edited or suppressed. Thus, a failure in the ability to create an assembly cannot be said to be aesthetic in nature because it, without correction, creates an inability to generate the

assembly. Thus, failed features of claims 1, 20 and 23 do not contemplate analysis of a CAD assembly involving aesthetic features.

Given the foregoing, it follows that *Tong* does not teach the required element of automatically providing a first set of treatments for a failure within the first **failed feature** from which to select, said first set of treatments based at least in part on the failure within the first **failed feature**, *said failure resulting from modifications of one or more features of the CAD assembly*.

Hirschtick is cited for disclosing identifying a failure within a first failed feature in a CAD assembly. However, to support a finding of obviousness, the cited references must teach every element of the disputed claim. Assuming, arguendo, *Hirschtick* does teach the identifying a failure within a first failed feature in a CAD assembly, *Hirschtick* does not cure the deficiency of *Tong* as cited above. That is, *Hirschtick* does not teach or suggest the automatically providing a first set of treatments for a failure within the first failed feature from which to select, the first set of treatments based at least in part on the failure within the first failed feature, the failure resulting from modifications of one or more features of the CAD assembly. Since neither *Hirschtick* nor *Tong* teach the automatically providing a first set of treatments for a failure within the first failed feature from which to select, the first set of treatments based at least in part on the failure within the first failed feature, the failure resulting from modifications of one or more features of the CAD assembly, they cannot be relied upon to support the rejection of claims 1, 20 or 23. Thus, for at least the reasons discussed above, Applicant respectfully submits that claims 1 and claim 20 are patentable over *Hirschtick* in view of *Tong*.

Claims 3, 6, 9, 10, 13-15, 17, 18 depend from independent claim 1 incorporating its elements. Thus, by virtue of at least their dependency on claim 1, claims 3, 6, 9, 10, 13-15, 17, 18 are patentable. In addition, claims 3, 6, 9, 10, 13-15, 17, 18 include numerous additional elements that render these claims further patentable over the asserted art.

Claims 21-22 and 24-25 depend from claims 20 and 23 respectively, incorporating their elements. Thus, by virtue of at least their dependency on claims 20 and 23, claims 21-22 and 24-25 are patentable. In addition, claims 21-22 and 24-25 include numerous additional elements that render these claims further patentable over the asserted art.

Hirschtick in view of Tong further in view of Brichta

Claims 4 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Hirschtick* in view of *Tong* in further view of *Brichta* et al., U.S. Patent No. 5,790,780 ("*Brichta*"). Applicant respectfully traverses this rejection.

Claims 4 and 5 depend from claim 1 thus inheriting the elements of claim 1. *Brichta* is cited for teaching storing a diagnosis object in persistent memory and retrieving a diagnosis object from persistent memory. Assuming, arguendo, *Brichta* does so teach, *Brichta* does not cure the deficiency of *Tong* and *Hirschtick* as cited above. That is, *Brichta* does not teach or suggest automatically providing a first set of treatments for a failure within the first failed feature from which to select, the first set of treatments based at least in part on the failure within the first failed feature, the failure resulting from modifications of one or more features of the CAD assembly. Thus, for at

least the reasons discussed above, Applicant respectfully submits that claims 4 and 5 are patentable over *Hirschtick* in view of *Tong* further in view of *Brichta*.

Hirschtick in view of Tong further in view of Harding

Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Hirschtick* in view of *Tong* in further view of *Harding* et al., U.S. Patent No. 6.232.982 ("*Harding*"). Applicant respectfully traverses this rejection.

Claims 7 and 8 depend from claim 1 thus inheriting the elements of claim 1. *Harding* is cited for teaching various elements surrounding receiving a selection indicating the first failed feature. Assuming, arguendo, *Harding* does so teach, *Harding* does not cure the deficiency of *Tong* and *Hirschtick* as cited above. That is, *Harding* does not teach or suggest automatically providing a first set of treatments for the failure within the first failed feature from which to select. Thus, for at least the reasons discussed above, Applicant respectfully submits that claims 7 and 8 are patentable over *Hirschtick* in view of *Tong* further in view of *Harding*.

Hirschtick in view of Tong further in view of Barequet

Claims 11, 12, and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Hirschtick* in view of *Tong* in further view of *Barequet* et al. "Repairing CAD Models" ("*Barequet*"). Applicant respectfully traverses this rejection.

Claims 11, 12, and 16 depend from claim 1 thus inheriting the elements of claim 1. *Barequet* is cited for teaching various graphical user interface techniques related to the elements of claims 11, 12 and 16. Assuming, arguendo, *Barequet* does so teach,

Barequet does not cure the deficiency of *Tong* and *Hirschtick* as cited above. That is, *Barequet* does not teach or suggest automatically providing a first set of treatments for the failure within the first failed feature from which to select. Thus, for at least the reasons discussed above, Applicant respectfully submits that claims 11, 12, and 16 are patentable over *Hirschtick* in view of *Tong* further in view of *Barequet*.

Krause in view of Tong

Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Krause et al.*, "Processing of CAD-Data -Conversion, Verification and Repair" ("*Krause*") in view of *Tong*. Applicant respectfully traverses this rejection.

Claim 2 depends from claim 1 thus inheriting the elements of claim 1. *Krause* is cited for identifying failures within a plurality of additional failed features. Assuming, *arguendo*, *Krause* does so teach, *Krause* does not cure the deficiency of *Tong* as cited above. That is, *Krause* does not teach or suggest automatically providing a first set of treatments for the failure within the first failed feature from which to select. Thus, for at least the reasons discussed above, Applicant respectfully submits that claim 2 is patentable over *Krause* in view of *Tong*.

Claim objection:

Claim 19 was objected to as being dependent upon a rejected base claim, but would otherwise be allowable if rewritten in independent form including all of the limitations of the base claim. However, as discussed above, Applicant respectfully

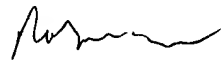
submits that claim 1 is in condition for allowance. It follows that claim 19 is also in condition for allowance as a dependent claim of claim 1.

Conclusion:

In view of the foregoing, claims 1-25 are in condition of allowance. Early issuance of Notice of Allowance is respectfully requested. The Examiner is encouraged to telephone the undersigned if there are any remaining questions of patentability, and a telephone interview would be helpful in resolving these questions.

Respectfully submitted,
Schwabe, Williamson & Wyatt, P.C.

Dated: 20 Jan 03



Robert Watt
Registration No. 45,890

Pacwest Center, Suites 1600-1900
1211 SW Fifth Avenue
Portland, Oregon 97204
Telephone: 503-222-9981